

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/589,075	SCOTT ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Michael LaPage	2886	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to appeal brief filed on 18<sup>th</sup> August 2010.
2. ☒ The allowed claim(s) is/are 1-3,5-12,14-16,19-21 and 24.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All    b) ☐ Some\*    c) ☐ None    of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
    3. ☒ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_.

**Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

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| <ol style="list-style-type: none"> <li>1. <input type="checkbox"/> Notice of References Cited (PTO-892)</li> <li>2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)</li> <li>3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br/>Paper No./Mail Date <u>15<sup>th</sup> September 2010</u></li> <li>4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material</li> </ol> | <ol style="list-style-type: none"> <li>5. <input type="checkbox"/> Notice of Informal Patent Application</li> <li>6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),<br/>Paper No./Mail Date <u>20101101</u> .</li> <li>7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment</li> <li>8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance</li> <li>9. <input type="checkbox"/> Other ____.</li> </ol> |
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### **EXAMINER'S AMENDMENT**

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Stanley Spooner on November 5<sup>th</sup> 2010.

The application has been amended as follows:

- a. In claim 1, lines 15-16, "two or more beams and" has been changed to --two or more diffracted beams and--.
- b. Claim 13 has been cancelled.
- c. In claim 19, lines 5-6, "from said object to have a planar wavefront if the object has said specified shape, a final beam" has been changed to --from said object to compensate for non-planarity introduced by said object having said specified shape, to provide a final beam--.
- d. In claim 19, lines 7, "by said shaping step;" has been changed to --by said shaping step, said final beam having a planar wavefront if the object has said specified shape;--
- e. In claim 19, line 10, "two or more beams;" has been changed to --two or more diffracted beams;--.
- f. In claim 24, lines 16-17 "two or more beams" has been changed to --two or more diffracted beams--.

***Allowable Subject Matter***

2. Claims 1-3, 5-12, 14-16, 19-21 and 24 are allowed.

The following is an examiner's statement of reasons for allowance:

As to claims 1, 19 and 24, the prior arts of record taken alone or in combination with any other references fail to teach or suggest the claimed method or apparatus where at least one **wavefront shaping means**, optically disposed between the radiation means and the inspecting means for **shaping** the **final beam** to have a **substantially planar wavefront** when **said object** has **said specified shape**, and said final beam comprises a beam which has **been both transmitted by or reflected** from **said object** and shaped by said wavefront shaping means, **said at least one wavefront shaping means is arranged to compensate for non-planarity introduced by said object having said specified shape**, and said inspecting means is arranged to determine any departure of the wavefront of the final beam from planarity, wherein said inspecting means comprises: beamsplitting means for **splitting** the final beam into **two or more diffracted beams** and for directing said two or more beams **to laterally displaced locations**; and. The closest reference of record Kanoh does disclose a majority of the distinguishing features above as can be seen in the final rejection dated 01/15/2010 however Kanoh fails to disclose where the beams are diffracted to laterally displaced locations. The interferometric apparatus of Kanoh relies on the basic function of overlapping two wavefronts in order to form an interference pattern in the overlapping space of each wavefront. Diffracting the beams of Kanoh to laterally displaced locations via a diffraction grating would remove any overlapping (via the diffraction orders) and

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would destroy any type of interferometric measurement taken in the system of Kanoh.

Therefore with the above amendment the instant claims overcome the primary reference and any secondary references of record. Similarly none of the references cited in the Japanese Search report overcome the new amended limitations of the above cited claims.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL LAPAGE whose telephone number is (571)270-3833. The examiner can normally be reached on Monday Through Friday 7:30AM-5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tarifur Chowdhury can be reached on 571-272-2287. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael LaPage/  
Examiner, Art Unit 2886

/TARIFUR R CHOWDHURY/

Supervisory Patent Examiner, Art Unit 2886